FIF0 - Assignments

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| 1. | **Chat Server**: Assume that a Chat Server listens to well-known point. When a first client wants to join in chat it is accepted. Afterwards, all the other client requests for joining in the chat. The Chat Server has to receive data from a client and has to send the same data to all the other clients who have joined in the chat. You can assume any special format for sending the data from client to server. Suppose five clients have joined in chat, then the Chat server should have six FIFOs. One well-known FIFO for reading data from all clients, and other private/individual five FIFOs to send data to clients. In other words, the clients will send the request for joining in the chat to well-known FIFO and also the clients will send chatting data to the well-known FIFO.  Implement Chat Server, and Client. |
| 2. | **Groups Chat Server**: Assume that a Chat Server opens five well-known FIFOS for various groups, i,e, G1, G2, G3, G4, G5. A client can join in any group Gi, and can chat as explained in above Assignment 1. A client receives all the chat messages of the group Gi, and it also can send chat messages to that group.  Implement Groups Chat Server, and Client. |
| 3. | **Multi–Data Service centers Server:** AMulti–Data Service centers Server S provides three Data service servers with executable files as D1.exe, D2.exe, and D3.exe. All the Clients first send request to well-known point of Multi–Data Service centers Server S. The Clients also inform server S, about the data service number they would like to use as numbers 1, 2, and 3. Depending on the data service number request from Client, server S arranges a separate corresponding Data service sever Di (if it is not existing), and the Client receives the data of standard output of Data service server Di as shown in figure below. If such Di is already existing, then sever S will not create a new Di , but it arranges that the Client receives the data of standard output of Data server Di it has requested. Suppose at the moment three Clients C1, C3, C5 requested for D1 service and C2, C4 requested for D3 service, one D1 process and one D3 process along with main sever process S will be existing in the scenario as shown in figure below. In other words, only one data service server process will exist, regardless of the number of client requests for it.  Implement Multi–Data Service centers Server S, D1, D2, D3 data service servers and Client. |